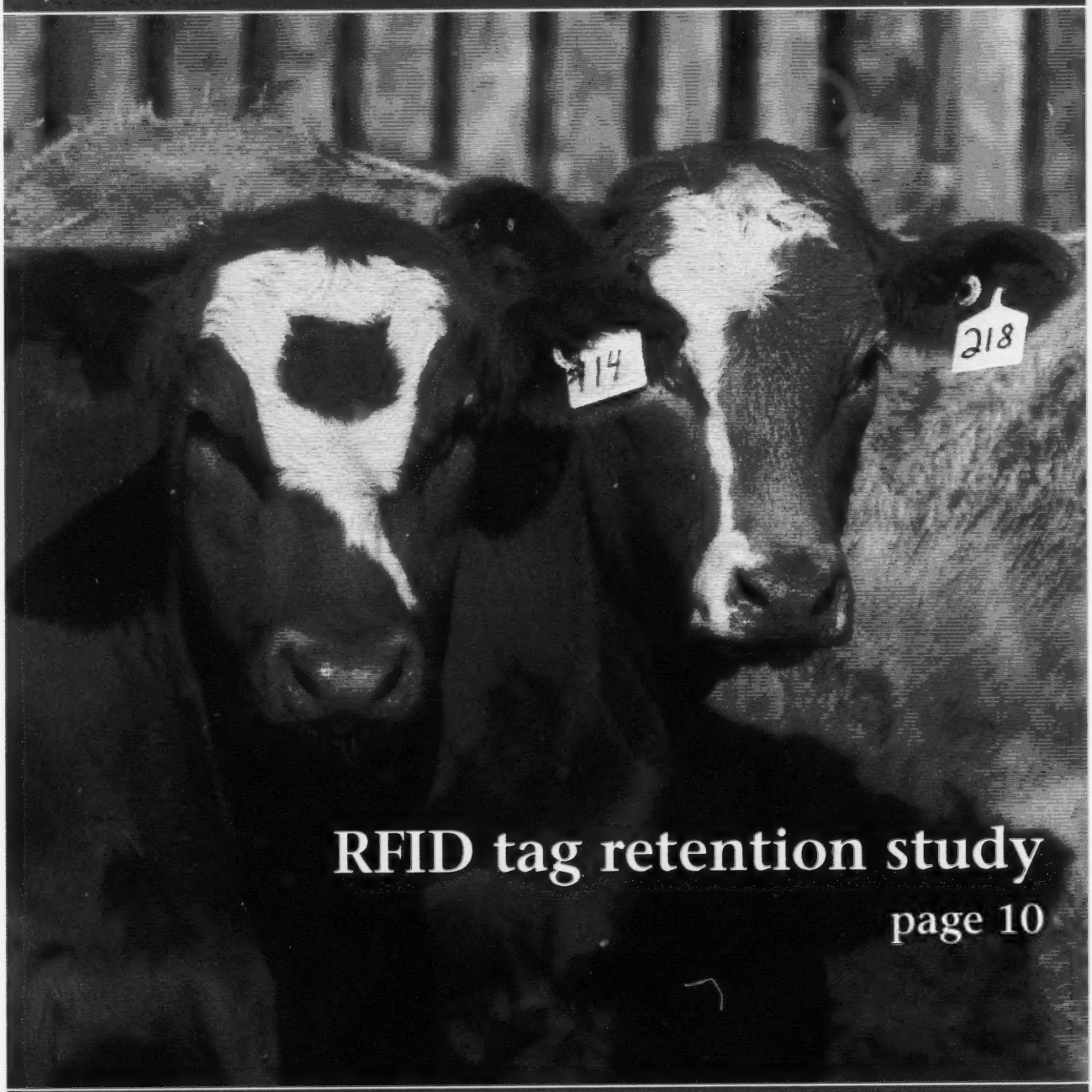
ISSUE 04

AGRIVIEW

JULY - AUGUST 2012

VOLUME 8



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Saskatchewan Agriculture

Minister's Message

I am both proud and humbled to be Saskatchewan's new Minister of Agriculture.

First, I want to recognize the work of former Agriculture Minister Bob Bjornerud, one of Saskatchewan's finest and longest-serving agriculture ministers. Bob has done a tremendous job and leaves big shoes to fill. I hope to continue building on his good work.

Agriculture is a bright spot in our province, with strong prices in both the crop and livestock sectors right now. I am excited to work with Saskatchewan farmers and ranchers, agribusinesses and my counterparts across Canada to sustain and build on our industry's growth.

Going forward, there are a few key areas I want to focus on during my time as Agriculture Minister.

For the first time ever, Saskatchewan exceeded $10 billion in agri-food exports in 2011 and now surpasses Ontario as the top agri-food exporting province in Canada. Most of our exports leave Saskatchewan in raw form. I believe there is an opportunity to add more value and produce higher value products. This will help our economy grow, create jobs and put more money in the pockets of Saskatchewan producers.

Irrigation is a key driver for adding more value to agriculture in Saskatchewan. Since 2008, the federal and provincial governments have provided nearly $30 million for irrigation expansion and rehabilitation, which is approximately $25 million more than was provided during the entire term of the previous provincial government. Irrigation presents a tremendous opportunity for our province and will continue to be a priority moving forward.

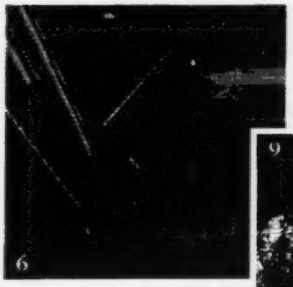
Agriculture is a major part of our economy, and today more than ever, a vibrant and sustainable industry. At the same time, the public is becoming more urbanized and further removed from primary agriculture. We need to continue our efforts to inform and educate urban citizens about the contributions of farmers, ranchers and the agriculture industry to our province. It's our job to ensure the public knows about the agriculture industry's commitment to providing safe, reliable food to feed a growing world. Agriculture has a good story and we can't be shy about telling it.

I look forward to working together with all of you to move the agriculture industry forward in Saskatchewan.

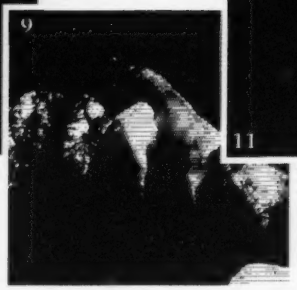
Sincerely,

Lyle Stewart

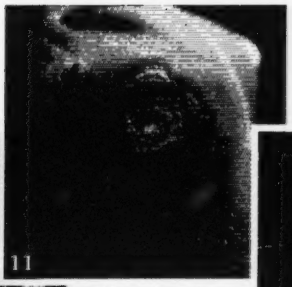
STORY SNAPSHOTS



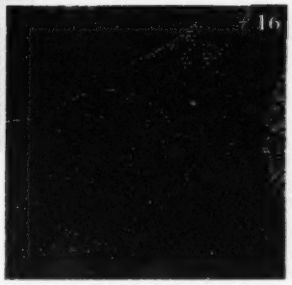
Grain storage considerations



Multi-species grazing



fungicide resistance in ascochyta populations



Lentil Recipe Revitalization Challenge

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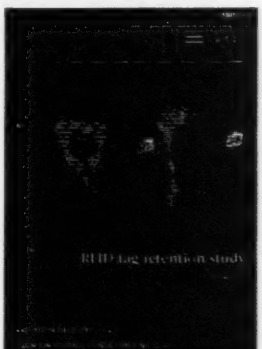


Cover: RFID tags on cattle at the University of Saskatchewan Beef Research Facility near Saskatoon, Saskatchewan.

Correction: The Ministry of Agriculture apologizes to Mr. Taryn Heidecker and Mr. Bradley Tomtene, two winners of the 2012 Agriculture Scholarship, for an error in the story published in the June edition entitled "10 Reasons to love agriculture: The Saskatchewan Agriculture Student Scholarship" on page 15. The quote printed in the story was credited to Mr. Tomtene, when in fact, the author of the statement was Mr. Heidecker. The correction has been made on the website version of this story.

Saskatchewan Agriculture

AGRIVIEW is published by the Communications Branch of Saskatchewan Agriculture for Saskatchewan farmers and farm and food organizations. **For more information, call 306-787-5160 or e-mail agriview@gov.sk.ca.**
To view this publication online, visit www.agriculture.gov.sk.ca/programs-services.

2012 Irrigation Field Day and Tradeshow

by Gerry Gross, PAg
Senior Irrigation Agrologist
Irrigation Branch

The Canada-Saskatchewan Irrigation Diversification Centre (CSIDC) will hold its annual irrigation field day and tradeshow on Thursday, July 12, 2012 in Outlook, SK. The focus for the 2012 event is on irrigation crop varieties and irrigation technology.

Specifically, the day's events will include a view of the ongoing regional and co-op variety trials, the Irrigation Crop Diversification Corporation irrigation variety adaption trials, irrigation agronomy trials, corn trials and ongoing vegetable trials. In addition, the tour will feature the new variable rate irrigation technology, which has been newly introduced to the Centre, and will provide an opportunity to discuss the established tile drainage system at CSIDC. Finally, industry representatives will be encouraged to attend and display equipment and materials currently available for tile drainage installations.

The morning field tour will provide an overview of the projects currently underway at CSDIC. In the afternoon, tours will focus on specific themes such as irrigation agronomy, fertility, drainage, irrigation scheduling and horticulture crops.

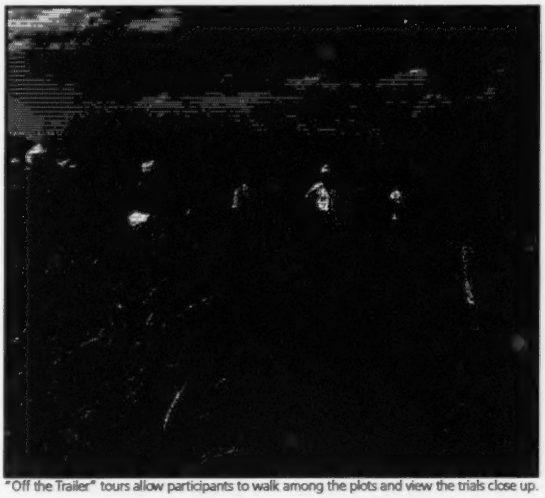
CSIDC operates under an agreement with five partners including Agriculture and Agri-Food Canada, the Saskatchewan Ministry of Agriculture, the Saskatchewan Irrigation Projects Association, the Irrigation Crop Diversification Corporation and the University of Saskatchewan. All five partners will be participating in the event.

Registered certified crop advisors will be able to earn Continuing Education Units at the event.

The day will begin at 9 a.m. with the tradeshow. Coffee and doughnuts will be offered. The morning tour then begins at 10 a.m. followed by lunch at noon. The afternoon tours will being at 1 p.m. Admission is free.

FOR MORE INFORMATION

- Contact Gerry Gross, PAg, Senior Irrigation Agrologist, at (306) 867-5223 or at gerry.gross@gov.sk.ca.



"Off the Trailer" tours allow participants to walk among the plots and view the trials close up.

THE IMPORTANCE OF PRE-HARVEST WEED CONTROL

by Brent Flaten, PAg, CCA
Integrated Pest Management Specialist
Regional Services Branch

Given the right conditions, fall is a great time to control perennials as it generally results in better control than spring herbicide applications. Due to limited control options with certain crops, it is also important to manage perennial weeds one or two years prior to seeding, especially with pulses, which are not very competitive, and forage stands with legumes.

Glyphosate can be used prior to the harvest of selected crops or forages. However, because it is not quick-acting like a desiccant, weed control or perennial forage termination should be the primary objective in the decision to use glyphosate. If the condition of the weeds is poor or they have completed their life-cycle (for example, foxtail barley or perennial sow thistle) reduced weed control may occur.

Use glyphosate prior to harvest on registered crops only. Grain buyers are increasingly checking for unregistered pesticide residues in grain they purchase. In some cases, even buyers of registered crops, particularly malt barley, milling oats and lentils have additional restrictions. Therefore, it is a good idea to check with your grain buyer before spraying.

If you used a herbicide earlier in the season that suppresses Canada thistle, make sure thistles have recovered and produced enough new growth to ensure adequate glyphosate uptake and movement within the plant. Pre-harvest applications earlier than August, which may occur with short season crops in southern parts of the province, could result in less weed control, since thistles may still be moving nutrients out, rather than into the roots.

Quack grass typically has lots of leaf surface to absorb glyphosate. Also, it is growing new rhizomes at the pre-harvest timing, allowing for good translocation to the roots.

Dandelions may be covered by a thick canopy of crop, making it tough for spray to reach them, which may reduce control. Post-harvest application may be better-suited to control dandelions in this case.

FOR MORE INFORMATION

- Consult the 2012 Guide to Crop Protection and the Spring Update on the Ministry website at www.agriculture.gov.sk.ca/Guide_to_Crop_Protection;
- Contact the Agriculture Knowledge Centre at 1-866-457-2377; or
- Contact your nearest Regional Crops Specialist.

Sprayer tracks after pre-harvest glyphosate application.

Herbicide resistance testing results from the Crop Protection Lab

by Clark Brenzil, PAg
Provincial Specialist, Weed Control
Crops Branch

Technicians at the Saskatchewan Crop Protection Lab are finishing up testing for herbicide resistance in weeds for 2011 crop year. These preliminary results give a preview of the overall trends for the year.

Testing is done in collaboration with Dr. Hugh Beckie of Agriculture and Agri-Food Canada (AAFC) Saskatoon. Samples are tested at the lab using a petri-dish examination where seeds are grown in media containing the test herbicide. Those tests where lab-bench assays are not available are sent to be tested by AAFC where they grow the weeds and spray them in a spray cabinet.

There were 76 herbicide resistance testing submissions from Saskatchewan, 103 from Alberta and 56 from Manitoba in 2011. Of these samples, 22 have yet to be completed. Some samples require repeat testing to get enough seed germination for a viable test, and others are not complete due to later submissions. Samples to the Crop Protection Laboratory are processed on a first received, first started basis. One or more re-tests may be needed with wild oat submissions to overcome dormancy in the seed.

Group 2 herbicide resistance in cleavers was found in one sample from Manitoba, five samples from Saskatchewan and two samples from Alberta, while one sample from Saskatchewan was not resistant and one sample could not be completed due to poor seed. Three samples of Persian darnel submitted from Saskatchewan were resistant to Group 1 herbicides, and one stinkweed sample from Saskatchewan was resistant to Group 2 herbicides. One wild mustard sample was not able to be tested for Group 2 resistance due to poor seed.

Herbicide resistant weeds are natural variants in the population of a particular weed species (e.g. wild oat), as a result of mutations to the genes that control the production of enzymes in the plant that are targeted by specific herbicide families or "Groups". The change to the enzyme means the herbicide can no longer interfere with the enzyme and the herbicide is rendered ineffective as a result. Before the exposure of the weed population to herbicides from a particular group, these variants are extremely rare over the whole of the species. Elimination of the members of the weed population without the resistance mutation, through the repeated application of herbicides from the same herbicide group, allow the surviving mutants to reproduce and increase to become the main type in the population.

The remainder of samples were wild oats. Of the samples submitted from Manitoba, eight were found to be resistant to Group 1 herbicides, 43 were found to be resistant to Group 2 herbicides, two were resistant to both Group 1 and Group 2, one sample was resistant to both Group 2 and Group 8, and one sample tested negative for Group 2 resistance. From the Saskatchewan submissions, 31 were found to be Group 1 resistant, two were Group 2 resistant, five were resistant to both Group 1 and Group 2, and five were found not resistant to the herbicides tested. Ten samples from Saskatchewan contained seed that was not viable and could not be tested. From the Alberta submissions, 49 were found to be resistant to Group 1 herbicides, 22 were resistant to Group 2 herbicides, 11 were resistant to both Group 1 and Group 2, one sample was resistant to both Group 1 and Group 8, one sample was resistant to a combination of Group 1, Group 2 and Group 8 herbicides, and six samples were found not resistant to the herbicides tested.

Managing herbicide-resistant biotypes will be a challenge for producers, particularly where weeds are resistant to multiple herbicide groups.

FOR MORE INFORMATION

- Consult the 2012 Guide to Crop Protection, available at www.agriculture.gov.sk.ca/Guide_to_Crop_Protection, at Saskatchewan Agriculture Regional Offices, and local crop input retail outlets;
- Contact the Agricultural Knowledge Centre at 1-866-457-2377; or
- Visit your nearest Regional Crops Specialist.

Wild oats being tested for Group 1 resistance using a Petri-dish assay at the Crop Protection Laboratory.

Wild oats being prepared for testing by removing the hulls and pricking the seed with a sharp object

A few considerations about your grain storage

by Lyndon Hicks, PAg
Regional Crops Specialist, Yorkton
Regional Services Branch

Grains may be stored for a long period of time but maintaining quality is dependent on the condition in which the grain was in when harvested and the storage facility being used. Generally speaking, grains binned at lower temperatures and moisture contents can be stored for longer periods of time before they begin to deteriorate. The occurrence of insects, molds and fungi will drastically reduce grain quality and these are all affected by grain moisture and temperature. There are a few things to consider before storing your harvested grain.

Preparation:

- Ensure that all machinery, augers, storage facilities and aeration systems are thoroughly cleaned before adding new grain.
- Treating bins with diatomaceous earth or Malathion is recommended prior to adding new grain. This is not recommended for storing oilseeds or pulse crops.
- Reduce or remove vegetation within 10 metres of a storage site to decrease the number of rodents and insects living adjacent to the stored grain.
- Mixing newly harvested grains with old infested grain (high moisture content or insects) could potentially contaminate all new harvested crops.

During filling:

- Consider aeration to bring stored grain temperature down to 10 C. Below this temperature, reproduction and movement of most insects is reduced.
- If planning to store grain for long periods of time, consider adding a grain protectant such as diatomaceous earth or Malathion (only on registered crops) when filling bins.

After filling:

- For grain stored above 10 C, inspect every two to three weeks for heating and insect activity. Use a grain probe to monitor the middle section of the stored grain, not just the edge.
- Consider top dressing a grain protectant to control surface feeder infestations.
- If insects become a problem, Phostoxin® can be used. It must be applied by a licensed pesticide applicator with a fumigation license when grain temperature is above 5 C.

FOR MORE INFORMATION

- Contact your local Regional Crops Specialist;
- Contact the Agriculture Knowledge Centre at 1-866-457-2377; or
- Visit the Ministry website at www.agriculture.gov.sk.ca.

USING ANNUAL CROP MIXTURES TO IMPROVE SOIL HEALTH

by Shannon Chant, MSc., PAg
Regional Crops Specialist, Swift Current
Regional Services Branch

Some producers in Southwest Saskatchewan have been looking at improving soil health on their farms.

A big part of improving soil health is feeding the micro-organisms in the soil and improving the organic matter level. A greater number and diversity of micro-organisms can mean faster and better nutrient cycling. Increased organic matter levels improve the soil's ability to provide nitrogen to crops along with its moisture-holding capacity.

Seeding a mixture of diverse annual crops will help meet these goals. These mixtures, called cocktail mixtures or cover crops, are seeded in mid to late June and can be killed by frost, tillage or chemical application. Increasing crop diversity also breaks up insect, disease and weed cycles and can reduce the need for pesticides.

Several projects under the Agricultural Demonstration of Practices and Technologies program along with on-farm research in the southwest are investigating how mixtures of warm and cool season oilseeds, pulses and cereals work. Some crops like peas, triticale and sunflowers are familiar while others such as kale, radishes and turnips are new to the area. As well, Hairy vetch and forage rapeseed have been included in some mixtures. Some radish varieties break down to provide phosphorus to next year's crop and have large, deep taproots that improve water infiltration. Kale has a lot of above ground growth that will increase the levels of organic matter in the soil. The crops in the mixture are flexible and should be specific to each farm, field and crop rotation.

If this is something you would like to try, start with a small area and remember that the change from using cocktail mixtures may not be measurable or noticeable in the first few years.

If you would like to see a cocktail mixture, the "Agronomy in Action" field day in Swift Current on July 12 will have a demonstration along with other research and demonstration projects from Wheatland Conservation Area and the Semi-Arid Prairie Agricultural Research Centre.

FOR MORE INFORMATION

- Contact the Agriculture Knowledge Centre at 1-866-457-2377; or
- Contact your nearest Regional Crops Specialist.

A 12-species mix grown in 2011 at the Wheatland Conservation Area.

Discover the 2012 Forage Field Day

by Sarah Sommerfeld, PAg
Regional Forage Specialist, Outlook
Regional Services Branch

A forage field day showcasing annual and perennial forages is planned for Tuesday, Aug. 21, at the Canada-Saskatchewan Irrigation Diversification Centre in Outlook, SK. The event will feature new and on-going forage-related projects relevant to both dry land and irrigation producers. The event will also focus on discussing practices and recommendations that producers can incorporate into their operations to optimize forage production and make the best use of their forage resources.

Demonstration projects to be featured in the event include:

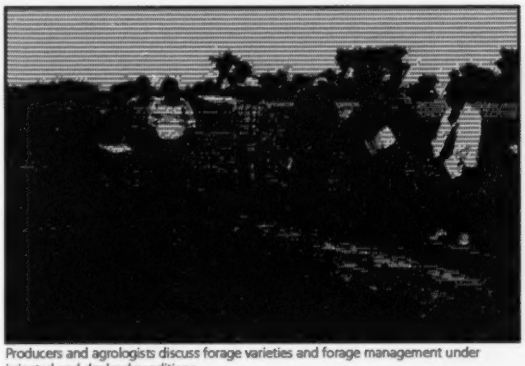
- An evaluation of commercial pasture blends;
- Perennial forage crops;
- Corn variety for silage and grazing – irrigated and dry land treatments;
- Salt-tolerant alfalfa varieties; and
- Nitrogen fertility following alfalfa breaking on oat production.

The projects above are funded by the Irrigation Crop Diversification Corporation (ICDC), a not-for-profit organization that is part of the Saskatchewan Agriculture – Applied Research Management (Agri-ARM) network. The ICDC conducts extension programs and farmer-directed research and demonstration projects to support Saskatchewan irrigators. In 2012, the ICDC programs focus on variety testing and agronomic demonstrations of field crops, including forages. To fund its programs, ICDC collects a check-off levy from district irrigators and receives funding support from the Ministry of Agriculture through the Agri-ARM network.

Plan to attend the 2012 Forage Field Day to learn about local research and demonstration projects, discuss tame forage management and connect with agrologists and producers. The event begins at 1 p.m. Admission is free.

FOR MORE INFORMATION

- Contact Sarah Sommerfeld, Regional Forage Specialist at (306) 867-5559 or at sarah.sommerfeld@gov.sk.ca.



Producers and agrologists discuss forage varieties and forage management under irrigated and dry land conditions.

THE BEST WAY TO TERMINATE FORAGE STANDS

by Allan Foster, PAg
Regional Forage Specialist, Tisdale
Regional Services Branch

and

by Trevor Lennox, MAg, PAg
Regional Forage Specialist, Swift Current
Regional Services Branch

There has been renewed interest in taking land out of tame forage and returning it to annual crop production. The yield of the subsequent annual crop will be dependent on a number of factors, with one of the more important ones being the degree of kill of the existing forage stand.

Terminating forage stands by tillage alone often requires intensive tillage to kill the existing forage plants and weeds. When intensive tillage is used to terminate a forage stand, some of the benefits to the soil associated with growing forages will be reduced. Intensive tillage can destroy soil aggregation and forage root channels reducing water infiltration and dry the topsoil, subjecting the soil to wind and water erosion.

Using herbicides alone to terminate forage stands and direct-seeding the annual crop presents its own set of challenges. Effective control of the old sod and weeds, accurate seed placement that will provide good soil to seed contact, adequate soil fertility and plant disease associated with the breakdown of the sod are all factors that will influence success.

A strategy that works well for forage stand termination is to use a combination of tillage and herbicides. The best time to initiate forage termination is the year prior to rotating to an annual crop.

When herbicides are used to terminate a forage stand they should be applied when target plants are actively growing. When using glyphosate, it should be applied at least five days prior to cultivation. If the forage is to be harvested, glyphosate should be applied as a pre-harvest treatment three to seven days prior to the final harvest. This allows adequate time for uptake and translocation of the herbicide within the plant. Termination during the growing season from July to September allows for the decomposition of existing roots and sod.

Obtaining adequate kill of the forage and any perennial weeds is one of the most important factors influencing yield when rotating to an annual crop. If herbicides are part of the termination strategy, using recommended products at the proper rate and timing will help ensure a successful transition.

FOR MORE INFORMATION

- Contact your local Saskatchewan Agriculture Regional Office; or
- Call the Agriculture Knowledge Centre at 1-866-457-2377.

Terminating a forage stand with herbicide.

Managing salinity with perennial forages

by Charlotte Ward, PAg
Regional Forage Specialist, Yorkton
Regional Services Branch

Soil salinity is considered a threat to long-term sustainable production in many parts of the Prairies. Agriculture and Agri-Food Canada estimates approximately 5.52 million acres (approximately 11.2 per cent) of agricultural land in Saskatchewan are at moderate to high risk of salinization.

Soil salinity levels range from non-saline (zero decisiemens per metre) to very severely saline (greater than 16 dS/m). As soil salinity levels increase, the stress on germinating seedlings also increases. Soluble salts prevent plants from taking up the proper balance of nutrients and water required for growth. In general, perennial plants can handle salinity better than annual plants.

Perennial forages have various levels of salt tolerance. Species such as tall wheatgrass, green wheatgrass, altai wildrye, Russian wildrye, slender and western wheatgrass have high salt tolerance (<16 dS/m). Slightly less saline tolerant forages include sweet clover, established alfalfa, tall fescue, and smooth bromegrass (<8 dS/m) as well as crested wheatgrass, intermediate wheatgrass and meadow bromegrass (<4 dS/m). Seedling alfalfa, white, red and alsike clovers have very low salt tolerance (2 dS/m). In comparison, barley has a salt tolerance of 8 dS/m.

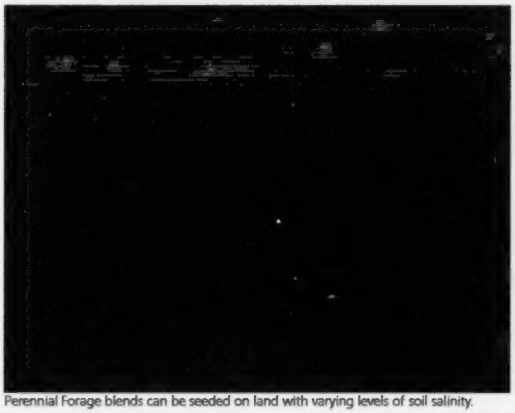
Recent forage breeding programs have recognized the challenge salinity poses to agricultural production and efforts have been made to develop forage varieties or species with improved salt tolerance. For example, newly developed varieties of alfalfa and green wheatgrass exceed the salt tolerance levels of their predecessors.

As salinity can vary within a very small area, one strategy when establishing forages in saline areas is to seed a complex mix of grasses and legumes with varying levels of salt tolerance. The result is greater establishment success and lessens the likelihood of establishment for weedy species such as foxtail barley.

Late fall plantings are often the best time to establish forages in saline soils when drier soils permit machinery to cross with minimal difficulty. Seeds will germinate early the following spring. Once established, perennial forages can have water-depleting characteristics which can be used to draw down the water table, leading to decreased soil salinity near the soil surface.

FOR MORE INFORMATION

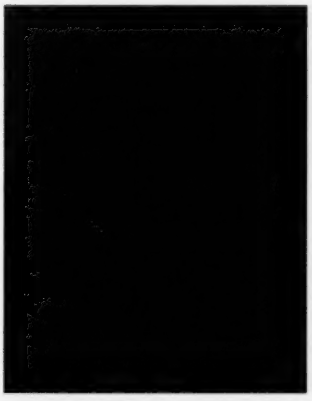
- Contact your local Regional Forage Specialist; or
- Contact the Agriculture Knowledge Centre at 1-866-457-2377.



Perennial Forage blends can be seeded on land with varying levels of soil salinity.

MEET SASKATCHEWAN'S NEW CHIEF VETERINARY OFFICER

The Ministry of Agriculture is please to announce the appointment of Dr. Betty Althouse as Saskatchewan's new Chief Veterinary Officer.



Betty has a wealth of experience and knowledge in livestock production and health, from her farming experience and veterinary background. A graduate of the Western College of Veterinary Medicine, she began her veterinary career at Animal Management Services in Humboldt working in a mixed practice where she quickly developed an interest in swine and dairy herd health.

Betty's interest in hog production lead her to establish a 50 sow farrow-to-finish straw-based hog barn in 1990. Since 1999, Betty has worked for the Canadian Food Inspection Agency (CFIA) in various roles, from veterinarian in charge at the Lilydale poultry slaughter facility to the veterinary disease control specialist and industry liaison. Most recently, Betty worked on the CFIA's disease control activities in Saskatchewan.

Betty is happy to continue her work with livestock producers and veterinarians in Saskatchewan to improve the health and welfare of the animals in our province.

FOR MORE INFORMATION

- Contact Betty Althouse, Saskatchewan's Chief Veterinary Officer by phone at (306) 787-5547; or
- Email at Betty.Althouse@gov.sk.ca.

Protect your herd against anthrax this summer

by Dr. LeeAnn Forsythe, DVM, MVetSc
Disease Surveillance Veterinarian
Livestock Branch

Saskatchewan cattle producers are encouraged to consult their veterinarian about having their herd vaccinated for anthrax, especially if they are in an area where anthrax outbreaks have occurred previously. All areas of the Prairies are potentially at risk for anthrax. However, the east-central area of Saskatchewan was identified as a high-risk area during the anthrax outbreak of July 2006. It was believed that flooding in the spring followed by hot and dry conditions may have been a factor in this outbreak.

Anthrax is a bacterial disease primarily of cattle, sheep, goats, bison and horses that results in sudden death in affected animals. Anthrax can be transmitted to humans; however, infections are extremely rare. When an animal dies of anthrax, the bacteria are exposed to the air forming spores that contaminate the soil. Anthrax spores are very resistant to extremes in temperature and moisture and therefore survive in the soil for many years. Floods can move spores up to the soil surface, and drying of flooded areas can expose spores to grazing livestock.

Most animals infected with anthrax are found dead. Clinical signs are short-lived and may include staggering, shortness of breath, trembling, collapse and convulsions. Bloody discharge from body openings is common. Cattle should be checked frequently while on summer pasture. If anthrax is suspected, the carcass should not be opened so that the soil is not contaminated with spore-forming anthrax bacteria. Early diagnosis and treatment is important due to the rapid action of this disease. Contact your veterinarian to examine cattle that are sick or have died. Anthrax is a federally reportable disease. If suspected, the Canadian Food Inspection Agency (CFIA) should be contacted.

Talk to your veterinarian about the risks of anthrax on your farm. The *Sterne* vaccine is available for use in Canada for cattle, horses, sheep, goats and pigs and provides immunity for approximately one year. Your local veterinarian and CFIA are the best sources of information on treatment and prevention methods for anthrax.

FOR MORE INFORMATION

- Visit CFIA's website at www.inspection.gc.ca.

MULTI-SPECIES GRAZING – AN ECONOMICAL WEED AND BRUSH CONTROL TOOL

Nadia Mori, MSc, PAg,
Regional Forage Specialist, Watrous
Regional Services Branch

Multi-species grazing refers to the use of more than one species of herbivore to graze a common forage resource. This practice can provide economic and ecological advantages over single species grazing due to differences in dietary preferences and foraging behaviour.

Ecological reasons for multi-species grazing include better pasture utilization, reduced weed population spread, and reduced brush encroachment. With the introduction of the new *Weed Control Act* in December 2010, producers carry increased responsibility to control and, where possible, eradicate noxious weed populations. Spraying, mowing or cultivating are often expensive options and may not be feasible in native pasture, on steep slopes, or close to water. In such cases, alternative biological control options such as goat browsing should be considered.

Goat browsing can be used in an area with weed and shrub abundance.

The economic benefits of multi-species grazing include increased stocking rates, increased meat production and market diversification. Cattle prefer grasses while goats prefer shrubs and forbs. With proper management, the combination of cattle and goats can result in better utilization of the grazing resource, while increasing stocking rates by an average of 10 to 15 per cent. The demand for goat meat currently exceeds local production capabilities as an estimated 60 per cent of goat meat sold in Canada is sourced through imports.

A multi-species grazing conference is being held Sept. 5 and 6 in Humboldt. The conference will provide an important opportunity for grazing managers and extension professionals to gain practical knowledge and expand their management skills. The event will feature field tours of weed and brush control projects using cattle and goats. These projects are administered by the Canadian Meat Goat Association and are funded through the Ministry's Agricultural Demonstration of Practices and Technologies Program. It will also highlight North American experts in goat production and multi-species management, as well as local producers and pasture managers.

FOR MORE INFORMATION

- Contact the Agriculture Knowledge Centre at 1-866-457-2377; or
- Contact your local Regional Forage Specialist; or
- Contact the Saskatchewan Goat Breeders Association at (306) 459-2270.

Tag retention study underway

by Paul Marciniak
Livestock Development Specialist
Livestock Branch

The federal *Health of Animals Act* required livestock owners and operators to have their cattle tagged with an approved Radio Frequency Identification (RFID) tag. However, the rate of tag retention is a concern for many producers.

Currently, there are no reliable statistics regarding the rate of tag retention; producer reports vary greatly. Although it is suspected the rate of tag retention varies significantly based on the tag manufacturer, method of application, and the environment in which the animals are placed, this data is almost entirely anecdotal.

In recognition of the issue of tag retention, the Saskatchewan Ministry of Agriculture, through the federal-provincial Growing Forward framework, has provided the Saskatchewan Stock Growers Association (SSGA) with funding to examine this issue. In partnership with the Canadian Cattle Identification Agency (CCIA), the SSGA is participating in a nation wide study in which several cattle operations will be observed over time to determine which techniques and tags work best to maximize tag retention.

Cattle operations in British Columbia, Alberta, Saskatchewan, Manitoba and Ontario are participating, with over 4,000 cattle on 19 operations involved in the study. The environments in which the cattle are placed represent a wide variety of the conditions on Canadian farms and ranches.

In an attempt to control variation in retention due to the method of tagging, cattle are tagged by personnel trained in using of tagging equipment. To examine rates of retention between various manufacturers of tags, the study uses an equal number of approved tags in each herd participating in the study. Tags are placed onto all classes of animals including calves, cows and breeding bulls.

The study began in 2011 and will continue until 2014. The results of this study will be made available to producers and the general public. It is expected that the results of this study will provide producers with advice on the best types of tags and methods of tagging animals to improve retention.

FOR MORE INFORMATION

- Visit our website at www.agriculture.gov.sk.ca;
- Contact CCIA at 1-877-909-2333; or
- Contact SSGA at (306) 757-8523.

MANAGING YOUR BREEDING SEASON

by Chelsey Carruthers, M.Sc., AAg
Regional Livestock Specialist, Watrous
Regional Services Branch

Planning the calving season starts at breeding. Producers often wish to limit the calving season to two months in duration. This results in a short, manageable calving season and a uniform calf crop at weaning. As producers prepare to turn bulls out this summer, there are a few things to keep in mind as to how long the breeding season should last.

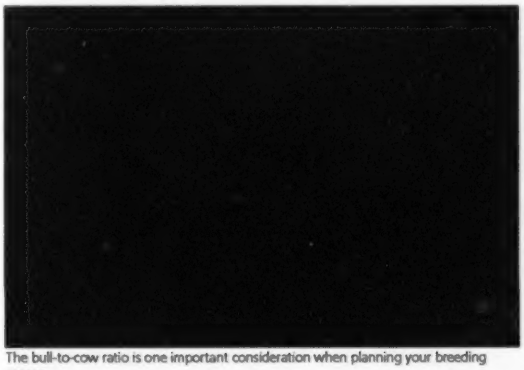
The success of a 45 to 60 day breeding season depends on the number of cows cycling, as well as the likelihood of cows conceiving during each cycle. Conception rates reflect both the fertility of the cows and the fertility of the bulls. Cow fertility has much to do with the body condition of the cows at calving, and during the period between calving and breeding. Cows in good body condition and gaining weight between calving and breeding will return to estrus faster, and will have a higher chance of conceiving early in the breeding season. Bulls should undergo a breeding soundness evaluation before the breeding season and should be checked regularly to make sure they are breeding cows.

The bull-to-cow ratio is another important consideration. A mature bull can usually breed between 30 and 40 cows. However, this number will be reduced in large pastures where the bulls have a lot of ground to cover. Yearling bulls should only be expected to breed 10 to 20 cows.

Also, keep in mind that first-calf heifers take longer to begin cycling after calving than mature cows. For this reason, replacement heifers should be bred as much as three weeks ahead of the cow herd. This will allow them to calve earlier than the mature cows and have more time to recover before the subsequent breeding season, keeping the entire cow herd on the same breeding schedule.

FOR MORE INFORMATION

- Contact your nearest Regional Livestock Specialist; or
- Call the Agriculture Knowledge Centre at 1-866-457-2377.



The bull-to-cow ratio is one important consideration when planning your breeding season.

Assessing fungicide resistance in ascochyta populations in Saskatchewan

Chickpea production rose dramatically in Saskatchewan in the mid-1990s. Now, 99 per cent of Canada's chickpeas are produced here in the land of living skies.

Like any crop, one major challenge faced by chickpea producers is disease, and ascochyta blight is the most significant disease threatening chickpea crops in Western Canada. Caused by the *Ascochyta rabiei* pathogen, it can result in 100-per-cent yield loss of an infested crop and has the potential to cause a breakdown in the industry.

Management of ascochyta blight is largely dependent on repeated applications of foliar fungicides throughout the growing season. However, because of the single-site-specific mode of action of the most popular fungicides, *A. rabiei* is at high risk of developing fungicide resistance – an outcome that could devastate Saskatchewan's chickpea industry.

With the financial support from the Saskatchewan Ministry of Agriculture's Agriculture Development Fund, Dr. Bruce Gossen and his team at the Agriculture and Agri-food Canada Saskatoon Research Centre, along with collaborators in Alberta and Ontario, set out to assess fungicide resistance in ascochyta populations and develop recommendations for future testing.

Ascochyta blight on a chickpea pod.

Strobilurins were the first group of fungicides to be tested. Results were clear: each year the number of *A. rabiei* isolates sensitive to the strobilurins dropped significantly. In 2005, 100 per cent were sensitive to pyraclostrobin, a commonly used strobilurin fungicide, followed by 50 per cent and three per cent in 2006 and 2007, respectively. Similar patterns were observed in Alberta, and researchers concluded that the pathogen population had become generally insensitive to pyraclostrobin.

The researchers also developed a protocol for assessing sensitivity of the pathogen to strobilurin, suitable for use in diagnostic and extension laboratories. While they noted that single-spore isolates of *A. rabiei* would provide a more accurate assessment, using mass transfer isolates resulted in substantial savings in time, labour and expense, with only a small sacrifice in accuracy.

Other alternative groups of fungicides tested in this study for controlling *A. rabiei* included boscalid, chlorothalonil, mancozeb and the newly registered fungicide *Vertisan* from DuPont. Each of these fungicides was effective against the *A. rabiei* population in Saskatchewan and there was no indication of loss of sensitivity.

In 2008, producers were advised about the remarkable shift in sensitivity to strobilurin fungicide. As a result, fungicide recommendations changed and that, coupled with dry conditions, kept the disease at check. This carried over into 2009 as well. In 2010, there were high levels of precipitation across the province's chickpea production area, creating conditions highly conducive to ascochyta blight. However, in most areas, the disease level was low to moderate, indicating that producers were able to adjust their fungicide usage patterns and manage the blight despite the fact that one of the most important fungicide groups had lost its effectiveness.

By providing valuable information on the efficacy of the fungicides and the development of potential pathogen resistance, the researchers continue to closely monitor *A. rabiei* and develop information necessary for the successful growth of the chickpea industry on the prairies.

In 2012, the Saskatchewan Ministry of Agriculture committed $11.8 million in new funding for 60 ADF research projects.

FOR MORE INFORMATION

- Visit the Saskatchewan Agriculture research reports page at www.agriculture.gov.sk.ca/ADF/search and enter the report number (#20070121) into the search function.
- Contact the researcher Dr. Bruce Gossen, AAFC, Saskatoon Research Centre, Phone (306) 956-7259 or email Bruce.Gossen@agr.gc.ca for more details.

Growing Forward

What are farm business management practices?

by Doris Morrow
Manager, Farm Business Management Services
Regional Services Branch

The Farm Business Development Initiative (FBDI) focuses on helping farmers obtain information, training and consulting services that will enhance their ability to make sound business decisions, increase their profitability and achieve their farm business goals. The initiative focuses on adopting or improving progressive farm business management practices. The nine practice areas covered by FBDI funding are:

Business strategy
Identifying a business vision and purpose, completing a strengths, weaknesses opportunities and threats (SWOT) analysis and preparing specific, measurable, attainable, realistic, and timely (SMART) goals for farm business and family.

Marketing Strategy
A marketing strategy is the understanding of price, product, placement and promotion of farm production in relation to the competitive environment.

Production Economics
They are the financial impact of various production decisions in farm business. This includes cost management, understanding cost of production, enterprise analysis, production strategies, environmental impacts and regulations that may impact the financial performance of the business. Also included are production of work schedules and performance measurements.

Financial Management
Understanding components and analysis of farm financial statements, knowledge of financial management components such as net worth, production, marketing plans, cash flow, historical and ratio analysis, debt service, and accrued income.

Human Resources
Planning how the organization will meet its current and future human resource needs includes attraction and retention.

Environmental Strategy
Understanding the process and components in developing an Environmental Farm Plan includes identifying environmental concerns and possible options to diminish risks.

Succession Planning
Succession planning is the processes and critical issues involved in transferring labour, management and ownership of farm assets to the next generation. It requires strategic retirement, implementation and contingency plans.

Business Structure
The understanding of all ownership options available and the advantages and disadvantages of each farm business structure.

Risk Management
Managing risk involves raising awareness of the risk factors facing farm businesses, including how to assess the probability of risk and techniques to diminish risk.

Applications for the Farm Business Development Initiative will be accepted until December 31, 2012.

FOR MORE INFORMATION
- Contact your nearest Regional Farm Business Management Specialist;
- Contact the Agriculture Knowledge Centre at 1-866-457-2377; or
- Visit www.agriculture.gov.sk.ca/programs-services.

ECONOMIC POWERHOUSES OF THE PACIFIC NORTHWEST MEETING IN SASKATOON

by Rob Swallow
Trade Policy Analyst
Policy Branch

The 2012 Pacific Northwest Economic Region (PNWER) Annual Summit is being held this summer in Saskatoon, July 15-19. Founded in 1991, PNWER is the only statutory, non-partisan, bi-national, public/private partnership in North America. The Ministry of Agriculture encourages stakeholders to take advantage of this opportunity to ensure their concerns are heard.

Saskatchewan, Alberta, British Columbia, Northwest Territories and Yukon along with Montana, Oregon, Idaho, Washington state and Alaska make up PNWER.

Agricultural regulatory alignment and co-operation with the United States will be prominently featured at the Summit. On Monday, July 16, the agriculture session will feature presentations and discussions by the leads of the Canada-U.S. Regulatory Cooperation Council (RCC) on their Joint Action Plan initiatives for mutual reliance on food testing results, common approaches to food safety and crop protection products.

The first two RCC working groups are critical for ensuring that the new *U.S. Food Safety Modernization Act* is implemented in a manner that minimizes trade disruptions by recognizing Canada's own food safety regulatory and testing systems. The crop production products working group is focusing on addressing differences in pesticide, regulation and registration processes to ensure our producers have access to the same products as their U.S. competitors, while maintaining Canada's standards for plant and food safety.

The RCC mandate is to make business between our countries more efficient through regulatory alignment and cooperation. Additional goals of the initiatives include mutual acceptance of laboratory results, eliminating the need for routine food safety surveillance inspections by the U.S. Food and Drug Administration in Canada and by Canadian officials in the U.S.; facilitating the equal access to effective means of pest control in both countries; and aligning maximum residue limits whenever possible.

These are critical issues for Saskatchewan's agriculture and food processing industries. Industry input on these initiatives has been recognized as a key component for their successful implementation.

FOR MORE INFORMATION
- Visit the Summit website at www.pnwer.org/2012annualsummit; or
- Contact Rob Swallow at (306) 787-1207 or at rob.swallow@gov.sk.ca.

Pair up with PREP to eradicate rats

by Richard Wilkins
Provincial Specialist, Pesticide Regulatory
Crops Branch

and

by Tayah Hanson
PREP Manager
Saskatchewan Association of Rural Municipalities

Producers can play a key role in rat eradication by participating in a zero tolerance strategy that focuses on four crucial aspects: prevention, access, identification, and reporting.

Rat burrows going under a building.

The Provincial Rat Eradication Program (PREP) is in full swing for the 2012 year. The goal of the program is the elimination of rats in the province. PREP makes grants available to rural municipalities to provide rat abatement activities and to conduct annual inspections of all agricultural sites, both occupied and unoccupied, here agricultural produce is stored or where livestock or poultry is or has been housed.

Rats thrive in hidden places where they can tunnel and access food and water sources. Best management practices suggest keeping yards and agricultural sites clear of harborage, such as rubbish, and debris. Special attention should be given to places such as bale stacks, old and new granaries, grain bags (especially bags nine months old or older), rock piles, tall grass, and discarded grain piles. The goal is to minimize or eliminate habitat in close proximity to water and food sources.

Rats that escape a cleanup program at one site often escape to neighboring yards; therefore, prevention baiting is a good neighbour policy. Many rural municipalities have rat bait available to ratepayers and your Pest Control Officer is able to assist with proper baiting techniques. Prevention bait stations should be set up in such a way that larger animals, pets, and children cannot access but that allow mice and rats to access freely.

Landowners and producers can help through:

Prevention - Clearing habitat used by the rat and preventative baiting.

Access - Allowing Pest Control Officers access to your land for inspections and rat abatement activity.

Identification - Identifying and reporting to the rural municipality administrator all sites that should be inspected including occupied/unoccupied old buildings, old landfills or private dumping areas on unoccupied land

Reporting - Reporting all rat sightings to your rural municipality as soon as possible, even if you are baiting your own land. Rats are nocturnal animals. If you see rats during the day, it is often an indication of a serious infestation.

PRODUCERS ENCOURAGED TO SEEK OUT FINAL YEAR OF AGRI-ENVIRONMENT GROUP PLANS FUNDING

by Jesse Nielsen, M.Sc.
Watershed Coordinator
Assiniboine Watershed Stewardship Association

The Assiniboine Watershed Stewardship Association (AWSA) will be wrapping up the final year of its Agri-Environmental Group Plans (AEGP) under the federal/provincial Growing Forward initiative on March 31, 2013.

The AEGP program offers cost-shared funding for 18 beneficial management practices (BMP) implemented on farms within the 25 rural municipalities of the Assiniboine River Watershed. BMPs reduce the environmental impacts of agricultural production while increasing the economic profitability of a producer's operations. Examples of funding include forage establishment, fencing, portable windbreaks and calf shelters, remote water systems, decommissioning abandoned and protecting existing water wells, double walled fuel tanks, and much more. The majority of BMPs are refunded at a 50 per cent rate. Since beginning operation of the AEGP program in 2009, the association has worked with over 800 producers, completed applications for over $7.4 million in project costs, with approximately half of that being refunded to local producers.

Important dates to remember:

- Projects must be completed by Dec.31, 2012;
- Claims must be received by the Provincial Council of Ag Development and Diversification Boards (PCAB) by Jan. 31, 2013; and
- If you know you won't be able to complete your project by Dec. 31, 2012, you must phone the PCAB office to withdraw your project from the system.

To complete a funding application for your project, contact Nolan Johnson at the AWSA office at (306) 783-1693 or at bmptech@assiniboinewatershed.com.

Funding for the AEGP program is made possible through partnership with Agriculture and Agri-Food Canada and the Saskatchewan Ministry of Agriculture.

FOR MORE INFORMATION

- Visit the AWSA website at www.assiniboinewatershed.com; or
- Contact the Provincial Council of Ag Development and Diversification Boards (PCAB) Head Office at 1-866-298-7222.

Census shows Saskatchewan agriculture is growing

by Terry Bedard
Statistician
Policy Branch

Agricultural data has been collected since the very first Canadian census in 1871. These figures are important and contribute greatly to our understanding of what it means to be a farmer in Saskatchewan. The data collected reflects a snapshot of a point in time; however, it gives us strong indications about the current and future state of agriculture in this province.

The 2011 census shows that agriculture in Saskatchewan is growing both in size and in value. The average size of a Saskatchewan farm has gone from 1,449 acres in 2006 to 1,668 acres in 2011, the largest average farm size in the country, and the largest growth in farm size in the country.

Thirteen per cent of farms reported $500,000 or more of total gross farm receipts in 2010 compared with four per cent in 2005. Forty-two per cent of farms report $1 million or more of total farm capital, compared with 25 per cent in 2005. In the time period between 2005 and 2010, Saskatchewan's gross farm receipts increased 10 per cent compared to the national increase of four per cent. While the farms with $500,000 or more of 2010 gross farm receipts represent 13 per cent of all farms in the province, they account for 60 per cent of total gross farm receipts reported for 2010.

Currently, there are 36,952 farms in the province. Overall, the number of farms in Saskatchewan has decreased by 17 per cent since 2006. There are 49,475 farm operators in the province, down from 59,185 in 2006. The proportion of male to female farm operators has remained relatively unchanged.

The average age of a farmer in Saskatchewan increased from 52.6 in 2006 to 54.2 in the 2011 survey. This reflects the aging baby boomer generation, and similar trends are being observed in various economic sectors. Nine per cent of our farmers are under 35 years old, 42 per cent are 35 to 54 years old, and 49 per cent are 55 years and older, compared to 10, 48, and 42 per cent, respectively in 2006.

In 2011, 47 per cent of operators worked more than 40 hours per week on the farm, compared to 53 per cent in 2006. The percentage of operators working more than 40 hours off the farm has remained relatively constant. Nineteen per cent of farm operators live off the farm compared to 15 per cent in 2006.

Over 60 per cent of farms are classified as a sole proprietorship, 17 per cent have a family corporation, and 16 per cent have a partnership without a written agreement.

Saskatchewan farmers continue to be industry leaders. In Saskatchewan, no-till methods were used on 70 per cent of the land prepared for seeding in 2011, up from 60 per cent in 2006. The 2011 census marked the first time farm operators were asked to report the area from which crop residue was baled for bedding or sale. In 2010, crop residue was baled from 1.3 million acres in Saskatchewan – the second largest area reported in the country.

There were 1,064 farms in Saskatchewan that reported certified or transitional organic production, which represents three per cent of all farms in the province. Nationwide, two per cent of all farms reported certified organic and/or transitional production. Saskatchewan continues to have the highest number of certified organic operations in the country despite a 15 per cent decrease since 2006.

In 2011, Saskatchewan had the second-largest cattle and bison herds in the country after Alberta. The census also showed that Saskatchewan has 32 per cent of Canada's elk, 15 per cent of the country's honeybee colonies, and 35 per cent of other pollinating bees.

Saskatchewan farmers are also leading the way in technology. For example, 48 per cent of Saskatchewan farms have an internet connection, compared to the national average of 45 per cent. Sixty per cent of farms report using a computer for farm business, which is up from 44 per cent in 2006.

Thank you to all Saskatchewan farmers for submitting their agriculture data to the Census of Agriculture, and ensuring we have good data for our province. This data helps us in a variety of ways, from studying trends to policy making.

To see all the results of the 2011 Census of Agriculture, log on to Statistics Canada's website at www.statcan.gc.ca.

FOR MORE INFORMATION

- Contact the Agriculture Knowledge Centre at 1-866-457-2377.

Growing Forward

Appraising crop yields before harvest

Too wet or too dry? Hail damage or early frost? The success of your crop is dependent on the weather and weather is highly variable from day to day and year to year. It also differs from place to place in the province. But if you have multi-peril crop insurance, you're covered.

Each customer decides how to best use the production from insured acres according to the specific conditions on their farm and their individual management plan. If you suffer from a weather event this summer and don't believe it is in your best interest to harvest the crop, contact the Saskatchewan Crop Insurance Corporation (SCIC) to register a pre-harvest claim. After SCIC conducts a pre-harvest appraisal, you can put your acres to uses other than harvest, such as baling or grazing.

While SCIC doesn't make you harvest your crop, it doesn't write-off your crop either. A pre-harvest appraisal captures the salvage value of the crop as there may be some potential value. It is this value that must be appraised if the crop will not be harvested. The appraisal is used in the calculation of any subsequent claims.

SCIC advises that you accompany the adjuster during any inspections. An adjuster will determine a yield based on plant counts and will also count the number of seeds per plant if the crop was headed. The adjuster will record and explain all information to you.

Inspections will be processed when you inform SCIC the crop has been put to a use other than harvest, which SCIC may verify. If you decide to leave the crop for harvest, the actual harvested production will be used in the calculation of a claim.

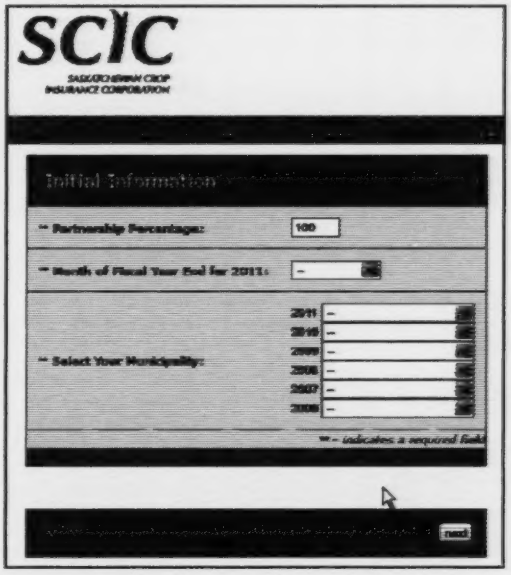
Depending on the circumstances, SCIC may not immediately conduct an inspection. Some crops have the ability to recover from damage, especially after early hail storms. Because recovery is dependent on weather conditions, SCIC may not be able to accurately appraise yield immediately following the storm.

FOR MORE INFORMATION

- Contact the nearest Crop Insurance office;
- Call 1-888-935-0000; or
- Visit www.saskcropinsurance.com.

2011 AGRISTABILITY ONLINE CALCULATOR

Effectively estimating your AgriStability benefit can be a challenge; however, the Saskatchewan Crop Insurance Corporation (SCIC) has an online tool that can help. By visiting www.saskcropinsurance.com, producers or their accountants can access the 2011 AgriStability online calculator to help determine the potential of a benefit payment and its possible value.



The online calculator takes the producer or accountant through a step-by-step process. Similar to completing AgriStability forms, the online calculator requires the farm's production, expense and income information. Before sitting down and using the calculator it is important to have tax and AgriStability information from previous years on-hand.

Once the producer has entered all the necessary information, a final benefit calculation is made. This estimate can help understand the way AgriStability works, how benefits are triggered and the impact of one year's results on the future reference margin. While the online calculator relies on the data entered by the producer, no information that is entered is recorded or saved by SCIC.

It is extremely important that the producer enter the information in the online calculator as they would when completing their AgriStability forms. This will help ensure the calculator produces a result that closely matches the actual final benefit calculation. Producers must remember though, while the calculator has been designed to provide an estimate of their potential AgriStability benefit, it does not guarantee receipt of a final benefit.

FOR MORE INFORMATION

- Contact the AgriStability call centre at 1-866-270-8450; or
- Try it out at www.saskcropinsurance.com.

DATE	EVENT	LOCATION	PHONE	INTERNET
July 5, 2012	Deadline to report seeded greenfeed acres	Saskatchewan Crop Insurance Corporation	1-888-935-0000	www.saskcropinsurance.com
July 11, 2012	Scott Field Day	Scott	(306) 446-7475	www.agriculture.gov.sk.ca
July 12, 2012	Agronomy in Action Tour	Swift Current	(306) 778-8291	www.agriculture.gov.sk.ca
July 12, 2012	Canada-Saskatchewan Irrigation Diversification Centre and Irrigation Crop Diversification Corporation Field Day	Outlook	(306) 867-5523	www.agriculture.gov.sk.ca
July 15, 2012	Deadline to reseed under the Organic Reseeding Benefit	Saskatchewan Crop Insurance Corporation	1-888-935-0000	www.saskcropinsurance.com
July 17, 2012	Conservation Learning Centre Field Day	Prince Albert	(306) 960-1834	www.agriculture.gov.sk.ca
July 18, 2012	South East Research Foundation Field Day	Redvers	(306) 848-2856	www.agriculture.gov.sk.ca
July 18, 2012	Melfort Field Day	Melfort	(306) 878-8807	www.agriculture.gov.sk.ca
July 24, 2012	Indian Head Agricultural Research Foundation Field Day	Indian Head	(306) 695-4200	www.agriculture.gov.sk.ca
August 8, 2012	Conservation Learning Centre Combine Clinic	Prince Albert	(306) 960-1834	www.agriculture.gov.sk.ca
August 25, 2012	Deadline to select winterkill coverage for fall rye and winter wheat	Saskatchewan Crop Insurance Corporation	1-888-935-0000	www.saskcropinsurance.com

You did *what* with lentils?

by Jamie Fischer
Junior Communications Consultant
Communications Branch

First grown in Southeast Asia in 7,000 B.C., lentils are now a popular Canadian crop. In fact, Saskatchewan is the largest lentil exporter in the world.

Despite their growing popularity with producers, lentils are still low on the grocery list for most Canadians. However, Canadian Lentils just wrapped up a contest designed to change that and bring lentils into twenty-first-century cooking.

The Lentil Recipe Revitalization Challenge brought in over 50 original lentil recipes from across the country. Alaina Leslie from Kingston, Ontario, took home the top prize of $1,000 with her recipe for curried lentil poutine. Leslie's wasn't the only surprising submission – recipes for red lentil velvet cupcakes, red lentil nachos and a lentil cranberry wrap all made it into the top 20.

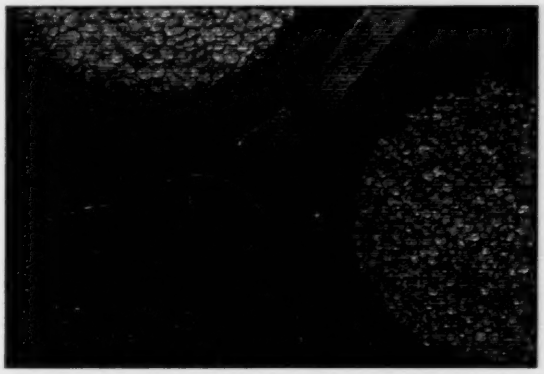
Lentils themselves are easy to cook with – no soaking required. They also have many nutritional benefits. They are low in fat and calories, but high in fiber. For families cooking for special diets, lentils can often be a great staple. They are naturally gluten-free and have a very low glycemic index, making them a healthy option for those with gluten sensitivities and diabetes. Lentils are also a good source of protein, iron, potassium, folate, and manganese.

Getting good nutrition from lentils is not limited to cooking. Adding a lentil puree to baked goods (even gluten-free goodies) can give cookies, muffins, and brownies a healthy kick.

To see the top 20 recipes from the Lentil Recipe Revitalization Challenge visit www.lentils.ca.

FOR MORE INFORMATION

- Contact the Agriculture Knowledge Centre at 1-866-457-2377; or
- Visit Canadian Lentils at www.lentils.ca.



Saskatchewan Agriculture